



Contents

Preface to the special issue (Part II) of Coordination Chemistry Review linked to the 33rd International Conference on Coordination Chemistry	1
Chemistry in the internal voids of dendrimers J.-P. Majoral, C. Larré, R. Laurent and A.-M. Caminade	3
Interaction of nitrogen bases with some platinum(II) and palladium(II) complexes—usual and unusual features P. Banerjee	19
Rapid derivatization of mesoporous thin-film materials based on Re(I) zinc-porphyrin ‘molecular squares’: selective modification of mesopore size and shape by binding of aromatic nitrogen donor ligands S. Bélanger, M.H. Keefe, J.L. Welch and J.T. Hupp	29
A photomagnetic effect for controlling spin states of Iron(II) complexes in molecular materials M.-L. Boillot, A. Sour, P. Delhaès, C. Mingotaud and H. Soyer	47
Kinetic aspects of interactions between DNA and platinum complexes J. Kozelka, F. Legendre, F. Reeder and J.-C. Chottard	61
Structural, acidity and chemical properties of some dihydrogen/hydride complexes of Group 8 metals with cyclopentadienyls and related ligands G. Jia and C.-P. Lau	83
Novel routes for the modification of iron porphyrins L. Łatos-Grażyński, K. Rachlewicz and J. Wojaczyński	109
The structure of cobalt corrinoids based on molecular mechanics and NOE-restrained molecular mechanics and dynamics simulations H. M. Marques and K. L. Brown	127

The table of contents of *Coordination Chemistry Reviews* is included in ESTOC
— Elsevier Science Tables of Contents service — which can be accessed on the
World Wide Web at the following URLs:
<http://www.elsevier.nl/locate/estoc> or <http://www.elsevier.com/locate/estoc>

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. Please refer to the online version of the Guide for Authors at <http://www.elsevier.com/locate/CCR>

Molecular architecture in the field of photonic devices P. Belser, S. Bernhard, C. Blum, A. Beyeler, L. De Cola and V. Balzani	155
Studies on the interaction of histidyl containing peptides with palladium(II) and platinum(II) complex ions P. Tsiveriotis and N. Hadjiliadis	171
The interaction of ferrocenoyl peptides with 3-aminopyrazole P. Saweczko and H.-B. Kraatz	185
Metallofullerene drug design L. J. Wilson, D. W. Cagle, T. P. Thrash, S. J. Kennel, S. Mirzadeh, J. Michael Alford and G. J. Ehrhardt	199
High-frequency EPR of transition ion complexes and metalloproteins W.R. Hagen	209
Triazolephthalocyanines: synthesis, supramolecular organization and physical properties M. Nicolau, B. Cabezon and T. Torres	231
Structure-function relationships of copper-containing nitrite reductases S. Suzuki, K. Kataoka, K. Yamaguchi, T. Inoue and Y. Kai	245
Structure and function of CooA, a novel transcriptional regulator containing a b-type heme as a CO sensor S. Aono and H. Nakajima	267
Solution thermodynamics of pyridinocalix(4)arenes and monovalent cations A.F. Danil de Namor	283
Lanthanides—the future drugs? K. Wang, R. Li, Y. Cheng and B. Zhu	297
Electronic structures of quasi-one-dimensional halogen-bridged Ni ^{III} complexes with strong electron-correlations M. Yamashita, T. Manabe, T. Kawashima, H. Okamoto and H. Kitagawa	309
Structural properties of the nickel ions in urease: novel insights into the catalytic and inhibition mechanisms S. Ciurli, S. Benini, W.R. Rypniewski, K.S. Wilson, S. Miletta and S. Mangani	331
Chiral metal complexes as probes in electron-transfer reactions involving metalloproteins K. Bernauer, S. Ghizdavu and L. Verardo	357
Dinuclear metal complexes of bis-macrocycles T.A. Kaden	371
Optical and electrical properties of vanadium oxides synthesized from alkoxides J. Livage	391
Isokinetic and isoequilibrium relationships in spin—crossover systems W. Linert and A.B. Kudryavtsev	405
Supramolecular architectures in low dimensional TCNQ compounds containing nickel and copper polyamine fragments L. Ballester, A. Gutiérrez, M.F. Perpiñán and M.T. Azcondo	447
Cooperative phenomena and light-induced bistability in iron(II) spin-crossover compounds A. Hauser, J. Jeftić, H. Romstedt, R. Hinek and H. Spiering	471
The role of haem in the activity of chloroquine and related antimalarial drugs T.J. Egan and H.M. Marques	493
Metallo-β-lactamases: does it take two to tango? J.A. Cricco, E.G. Orellano, R.M. Rasia, E.A. Ceccarelli and A.J. Vila	519

Advancement in stereochemical aspects of Schiff base metal complexes S. Yamada	537
Carbon dioxide interaction with metal atoms: matrix isolation spectroscopic study and DFT calculations J. Mascetti, F. Galan and I. Pápai	557
Nitrile hydratase and related non-heme iron sulfur complexes I. Artaud, S. Chatel, A.S. Chauvin, D. Bonnet, M.A. Kopf and P. Leduc	577
Chemistry in fluorous media: a user's guide to practical considerations in the application of fluorous catalysts and reagents L. P. Barthel-Rosa and J. A. Gladysz	587
On the function of nitrogenase FeMo cofactors and competitive catalysts: chemical principles, structural blue-prints, and the relevance of iron sulfur complexes for N ₂ fixation D. Sellmann, J. Utz, N. Blum and F.W. Heinemann	607
Correlations of the distribution of spin states in spin crossover compounds H. Spiering, T. Kohlhaas, H. Romstedt, A. Hauser, C. Bruns-Yilmaz, J. Kusz and P. Gütlich	629
Molecular events switched by transition metals V. Amendola, L. Fabbrizzi, M. Licchelli, C. Mangano, P. Pallavicini, L. Parodi and A. Poggi	649
Photoinduced processes in multicomponent arrays containing transition metal complexes L. Flamigni, F. Barigelli, N. Armaroli, J.-P. Collin, I.M. Dixon, J.-P. Sauvage and J.A.G. Williams	671
Porphyrin assemblies as chemical sensors R. Purrello, S. Gurrieri and R. Lauceri	683
Low temperature route towards new materials: solvothermal synthesis of metal chalcogenides in ethylenediamine J. Li, Z. Chen, R.-J. Wang and D.M. Proserpio	707
Organic/inorganic composite materials: the roles of organoamine ligands in the design of inorganic solids D.J. Chesnut, D. Hagrman, P.J. Zapf, R.P. Hammond, R. LaDuka, Jr., R.C. Haushalter and J. Zubietra	737
Reactivity of galactose oxidase C.D. Borman, C.G. Saysell, A. Sokolowski, M.B. Twitchett, C. Wright and A.G. Sykes	771
Trifluoromethylmetallate anions as components of molecular charge transfer salts and superconductors J.A. Schlueter, U. Geiser, A.M. Kini, H.H. Wang, J.M. Williams, D. Naumann, T. Roy, B. Hoge and R. Eujen	781
Stereoselective synthesis of coordination compounds A. von Zelewsky	811
Coordination complexes in two dimensional magnets and superconductors P. Day	827
Multifunctional coordination compounds: design and properties S. Decurtins, R. Pellaux, G. Antorrena and F. Palacio	841
Dioxygen activation by copper sites: relative stability and reactivity of (μ - η^2 : η^2 -peroxo)- and bis(μ -oxo)dicopper cores P. L. Holland and W. B. Tolman	855
The 3Fe containing ferredoxin from <i>Desulfovibrio gigas</i> : an NMR characterization of the oxidised and intermediate states A.L. Macedo, P. Rodrigues and B.J. Goodfellow	871

Perspectives of rhodium organometallic catalysis. Fundamental and applied aspects of hydroformylation	883
A.M. Trzeciak and J.J. Ziolkowski	
Basic aqueous chemistry of $[M(OH_2)_3(CO)_3]^+$ ($M = Re, Tc$) directed towards radiopharmaceutical application	901
R. Alberto, R. Schibli, R. Waibel, U. Abram and A.P. Schubiger	
A novel superconductor with insulating magnetic ground state	921
H. Kobayashi, A. Sato, H. Tanaka, A. Kobayashi and P. Cassoux	
Pt-catalyzed hydrosilylation of ethylene. A theoretical study of the reaction mechanism	933
S. Sakaki, N. Mizoe, M. Sugimoto and Y. Musashi	
New approach to the construction of an artificial hemoprotein complex	961
T. Hayashi, Y. Hitomi, T. Takimura, A. Tomokuni, T. Mizutani, Y. Hisaeda and H. Ogoshi	
Electron deficient bonding of benzoheterocycles to triosmium clusters: synthesis and applications to organic chemistry	975
M. Joynal Abedin, B. Bergman, R. Holmquist, R. Smith, E. Rosenberg, J. Ciurash, K. Hardcastle, J. Roe, V. Vazquez, C. Roe, S. Kabir, B. Roy, S. Alam and K.A. Azam	
Studies of hyperfine interactions in [2Fe-2S] proteins by EPR and double resonance spectroscopy	1003
R. Cammack, E. Gay and J.K. Shergill	
Molecules to build solids: high T_c molecule-based magnets by design and recent revival of cyano complexes chemistry	1023
M. Verdaguer, A. Bleuzen, V. Marvaud, J. Vaissermann, M. Seuleiman, C. Desplanches, A. Scuiller, C. Train, R. Garde, G. Gelly, C. Lomenech, I. Rosenman, P. Veillet, C. Cartier and F. Villain	
Protein-bound iron-sulfur centers. Form, function, and assembly	1049
S. Bian and J.A. Cowan	
A bioinspired approach to control over size, shape and function of polynuclear iron compounds	1067
A. Mandel, W. Schmitt, T.G. Womack, R. Bhalla, R.K. Henderson, S.L. Heath and A.K. Powell	
The possible role of Cu(II) for the origin of life	1085
B.M. Rode and Y. Suwannachot	
X-ray absorption spectroscopy in coordination chemistry	1101
J.E. Penner-Hahn	
Arene-selective peptide and protein derivatization	1125
D.B. Grotjahn	
Addition reactions of mononuclear η^3 -allenyl/propargyl transition metal complexes: a new class of potent organometallic carbon electrophiles	1143
J.-T. Chen	
Valence transition with charge ordering in a conductive MMX-chain complex	1169
H. Kitagawa and T. Mitani	
Inter-facial catalysis using various water-compatible ligands in supramolecular systems	1185
P. Kalck and M. Dessoudeix	
Iron biominerals in medicine and the environment	1199
J. Webb, D.J. Macey, W. Chua-anusorn, T.G. St. Pierre, L.R. Brooker, I. Rahman and B. Noller	
Mono- and dinuclear sesquifulvalene complexes, organometallic materials with large nonlinear optical properties	1217
J. Heck, S. Dabek, T. Meyer-Friedrichsen and H. Wong	

The labile magnetic structure of JT copper and nickel complexes in the layered oxides Y.V. Yablokov and T.A. Ivanova	1255
From clusters to nanoparticles and catalysis B.F.G. Johnson	1269
Author index	1287
Subject index	1289

US Mailing notice

Coordination Chemistry Reviews (ISSN 0010-8545) is published monthly (total 12 volumes) by Elsevier Science S.A. (PO Box 564, 1001 Lausanne). Annual subscription price in the USA is US\$ 3280.00 (valid in North, Central and South America), including air speed delivery. Second class postage rate is paid at Jamaica, NY 11431.

USA POSTMASTER: Send address changes to *Coordination Chemistry Reviews* Publications Expediting, Inc., 200 Meacham Avenue, Elmont, NY 11003, USA.

AIRFREIGHT AND MAILING in the USA by Publication Expediting Inc., 200 Meacham Avenue, Elmont, NY 11003.

Advertising information: Advertising orders and enquiries may be sent to: **International:** Elsevier Science, Advertising Department, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK, Tel: + 44 1865 843565, Fax: + 44 1865 843 976. **USA and Canada:** Elsevier Science Inc., Mr. Tino DeCarlo, 655 Avenue of the Americas, New York, NY 10010-5107, USA; Tel: + 1 (212) 633 3815; Fax: + 1 (212) 633 3820. **Japan:** Elsevier Science Japan, Marketing Services, 1-9-15 Higashi-Azabu, Minato-ku, Tokyo 106-0044, Japan, Tel: + 81 3 5561 5033, Fax: + 81 3 5561 5047.